

SECTION 03254
ELASTOMERIC BEARING PADS

PART 1 - GENERAL

0.1 DESCRIPTION OF WORK

- A.** Work Included: This Section specifies elastomeric bearing pads for bridge structures.

0.2 SUBMITTALS

- A.** Submit manufacturer's literature or shop drawings for products provided under this Section.
- B.** Samples: Furnish one sample elastomeric bearing pad for each type of pad used in the work for destructive testing. Samples will be selected by the Engineer at random from the lots delivered to the project site.

0.3 QUALITY ASSURANCE

- A.** Test specimens will be cut from the sample elastomeric bearing pads and will be tested for conformance to these Specifications. For such test specimens a reduction of 10% in the minimum requirements for original tensile strength and ultimate elongation will be permitted.
- B.** Hold Point - Do not set elastomeric bearing pads in place until the samples have been tested and approved by the Engineer.

PART 2 - PRODUCTS

0.1 ELASTOMERIC BEARING PADS

- A.** Type: Either plain bearing pads, consisting of elastomer only, or laminated bearing pads, consisting of layers of elastomer restrained at their interfaces by bonded laminates, as indicated. Railroad bridge bearing pads shall conform with Part 18 of the American Railroad Engineers Association (AREA) requirements.
- B.** Elastomer portion of the elastomeric compound: 100% virgin chloroprene.

- C. Plain Type: Molded individually cut from previously molded strips or slabs, or extruded and cut to length: cut edges at least as smooth as ANSI 250 finish.
- D. Laminated Type: All components laminated bearing pads molded together into an integral unit and all edges of the non-elastic lamination covered by a minimum of 1/8 inch of elastomer -except at laminate restraining devices and around holes that will be entirely closed on the finished structure. Laminates: rolled mild steel sheets conforming to ASTM A 36, A 570, Grade C or D or A61 1, Grade C or D.

E. Physical Requirements

1. Finish, appearance, flash, and rubber to metal bonding, as defined in Rubber Manufacturers Association Handbook:
 - a. Thickness: no undersize and not more than 10% oversize.
 - b. Length and Width: As indicated, plus or minus 1/8 inch
 - c. Finish: commercial finish (Table V. Symbol F.3)
 - d. Flash: tear trim tolerance (Table VI. Symbol T.063)
 - e. Rubber-to-Metal Bonding (min.): 40 pounds per inch width (Grade 2. Method B. Table VIII).
2. Static load deflection: for any layer of elastomeric bearing, 7% maximum 800 psi average unit pressure when tested under laboratory conditions.
3. Physical Properties
 - a. Hardness, per ASTM D 2240: 60, plus or minus 6
 - b. Tensile strength, per ASTM D 412: 2500 psi minimum
 - c. Ultimate elongation, per ASTM D 412: 350% minimum
4. Heat Resistance per ASTM D 573, 70 hours at 212° F.
 - a. Change in durometer hardness: plus 15 points maximum
 - b. Change in tensile strength: minus 15% maximum
 - c. Change in ultimate elongation minus 40% maximum
5. Compression set, per ASTM D 395, Method B, 22 hours at 212°F: 35% maximum
6. Ozone cracking, per ASTM D1 149, 100-pphm ozone in air by volume, 20% strain, 100 plus or minus 2°F, 100 hours, mounting procedure A per ASTM D 518: no cracks.
7. Adhesion, per ASTM D429, Method B, bond made during vulcanization: 40 pounds per inch.
8. Low Temperature Test
 - a. Sample preparation: 96 hours at -20 plus or minus 2°F, axial load 500 psi strain of 20% effective rubber thickness.
 - b. Shear resistance after one hour at 25% shear strain: 75 psi maximum.

PART 3 - EXECUTION

0.1 GENERAL

- A.** Install elastomeric bearing pads in accordance with the details contained in the Contract Drawings. Make any adjustments required to install the bearing pads in the correct horizontal and vertical location.

PART 4 - MEASUREMENT AND PAYMENT

0.1 MEASUREMENT

- A.** Elastomeric bearing pads will be measured per each installed in the work.

0.2 PAYMENT

- A.** Elastomeric bearing pads will be paid for at the Contract unit prices for the quantities determined as specified above.

0.3 PAYMENT ITEMS

ITEM NO.	DESCRIPTION	UNIT
0343.150	ELASTOMERIC BEARINGS	EA

END OF SECTION

NOTES TO THE DESIGNER

A. Any request to modify or waive the specification requirements listed below must be approved in writing by the MBTA's Director of Design:

1. None.